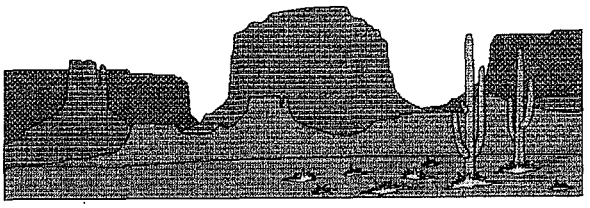
ENVIRONMENTAL OVERVIEW



DOUGLAS MUNICIPAL AIRPORT MASTER PLAN

CHAPTER VII: ENVIRONMENTAL OVERVIEW

7.0 INTRODUCTION

This Environmental Overview was prepared in conjunction with recommendations given in the Airport Master Plan Study for the Douglas Municipal Airport. The Airport Master Plan addresses phased development at the airport over a 20 year planning period. This Environmental Overview addresses major improvements which are recommended for the Douglas Municipal Airport, in particular the widening and extension of Runway 3/21 and the construction of a replacement crosswind runway. The Overview is the first step that must be taken before any major improvements or construction can be implemented at the airport. The Environmental Overview is the coordination process which starts initial communications with Federal, State, and Local agencies that may have an interest in the project. The Overview identifies the need and scope of any future Environmental Assessment (EA), which is the second step of the process. The Environmental Assessment identifies the level of significance and any significant impact that airport construction may have on the categories identified below. Agency coordination letters have been included in the Appendix of this study. The categories to be examined as listed in FAA Order 5050.4A, "Airport Environmental Handbook", include the following:

- Noise
- Compatible Land Use
- Social Impacts
- Induced Socioeconomic Impacts
- Air Quality
- Water Quality
- Department of Transportation Act Section 4(f)
- Historical, Architectural, Archaeological, and Cultural Resources
- Biotic Communities
- Endangered and Threatened Species of Flora and Fauna

- Wetlands
- Floodplains
- Coastal Zone Management Program
- Coastal Barriers
- Wild and Scenic Rivers
- Farmlands
- Energy Supply and Natural Resources
- Light Emissions
- Solid Waste Impacts
- Construction Impacts

7.1 NOISE

As stated in the FAA Order 5050.4A, Airport Environmental Handbook, paragraph 47(e)(1)(a), "No noise analysis is needed for proposals involving Design Group I and II airplanes on utility . . . or transport. . . type airports whose forecast operations in the period covered by the Environmental Assessment do not exceed 90,000 annual adjusted propeller operations or 700 annual adjusted jet operations . . . ". The Order further states that even if a major runway extension is proposed, a noise analysis is only needed at an airport which is 1) a transport airport accommodating Airplane Design Groups III-VI, 2) a transport airport accommodating only Airplane Design Groups I and II or a utility airport, either of which have forecast operations in excess of those defined above, 3) highly controversial because of noise impacts, or 4) may be frequently used by special aircraft such as helicopters in proximity to noise sensitive areas. According to these stipulations, a noise analysis is not needed for the Douglas Municipal Airport, since it does not fall into any of the above listed categories. Also provided as a reference is Figure 7-1, which is a comparison of noise levels.

7.2 COMPATIBLE LAND USE

Compatible land use issues around aviation facilities include noise impacts, zoning which includes building height restrictions, and the proximity of landfills or treatment plants.

Noise: As described in Section 7.1, no noise analysis is required for the Douglas Municipal Airport due to the types of aircraft using the airport and the forecasted number of annual operations. Therefore, it can be expected that no significant noise impacts will result from the extension of Runway 3/21 or the construction of a replacement crosswind runway.

FIGURE 7-1
COMPARATIVE NOISE LEVELS

Db(A)0	OVER-ALL LEVEL Sound Pressure Level Approximately 0.0002 Microbar	COMMUNITY (Outdoor)	HOME OR INDUSTRY	LOUDNESS Human Judgement of Different Sound Levels
130	*UNCOMFORTABLY LOUD*	*Military Jet Aircraft Takeoff With After Burner From Aircraft Carrier @ 50'*	*Oxygen Torch*	*120 dB(A) 32 Times As Loud*
120		*Turbo-Fan Aircraft @ Takeoff Power @ 200'*	*Riveting Machine*	*110 dB(A) 16 Times As Loud*
110			*Rock-N-Roll Band*	
100	*VERY LOUD*	*Jet Flyover @ 1,000' Boeing 707, DC-8 @ 6,080' Before Landing Bell J-2A Helicopter @ 100'*		*100 dB(A) 8 Times As Loud*
90		*Power Mower* *Boeing 707, DC-8 @ 6,080' Before Landing* *Motorcycle @ 25'*	*Newspaper Press*	*90 dB(A) 4 Times As Loud*
80		*Car Wash @ 20'* *Prop Airplane, Flyover @ 1,000'* *Diesel Truck, 40 MPH @ 50'* *Diesel Train, 45 MPH @ 100'*	*Food Blender* *Milling Machine* *Garbage Disposal*	*80 dB(A) 2 Times As Loud*
70	*MODERATELY LOUD*	*High Urban Ambient Sound* *Passenger Car, 65 MPH @ 25'* *Freeway @ 50'* *From Pavement Edge, 10:00 A.M.*	*Living Room Music* *TV-Audio, Vacuum Cleaner*	*70 dB(A)*
60		*Air Conditioning Unit @ 100'*	*Cash Register @ 10'* *Electric Typewriter @ 10'* *Dishwasher @ 10'* *Conversation*	*60 dB(A) 1/2 As Loud*
50	*QUIET*	*Large Transformers @ 100'*		*50 dB(A) 1/4 As Loud*
40		*Bird Calls* *Lower Limit Urban Ambient Sound*		*40 dB(A) 1/8 As Loud*
	JUST AUDIBLE	*(dB(A) Scale Interrupted)*		
10	*THRESHOLD OF HEARING*			

Zoning: The City of Douglas Zoning ordinances and maps provided by the City of Douglas indicate that the Douglas Municipal Airport property and surrounding areas are zoned as a Special Use (SU) District. This SU District permits uses such as racetracks, fairgrounds, baseball or football stadiums, rodeo grounds and arenas, drive-in theaters, refineries, golf courses, and shooting ranges. All of these are considered compatible land uses with airport operations. However, the SU District also allows hospitals, sanatoriums, penal or corrections institutions, colleges and universities, all of which are not permitted uses. The zone is also not specific as to building height restrictions within the SU District. Therefore, the City of Douglas and Cochise County should adopt the Model Zoning ordinance provided in the Appendix of this study to prevent incompatible land uses and potential penetrations of FAA Part 77 surfaces.

Landfills/Treatment Plants: The City of Douglas' landfill is located approximately four miles west of the Douglas Municipal Airport. FAA Order 5050.4A states that landfills are considered an incompatible land uses if located within 5,000 feet of runways which serve piston-type aircraft or within 10,000 feet of runways which serve turbojet aircraft. The City of Douglas' landfill is outside of this distance requirement; however, City officials should assure that no new landfills be established within 10,000 feet of the Douglas Municipal Airport in the future. An FAA Draft Advisory Circular on Wildlife Attractions on or Near Airports also discourages the location of treatment plants within the same radii described previously.

7.3 SOCIAL IMPACTS

7.3.1 Land Acquisition

Approximately three acres of land will need to be acquired to accommodate the recommended primary runway extension and approximately 40 acres for the replacement crosswind runway. No residences or businesses will have to be acquired or relocated with any of the land needed for future airport development.

7.3.2 Economic Impacts

The primary reason for improvements to the airport is to provide a safe and efficient airfield that meets the criteria for an Airport Reference Code (ARC) of B-II for Runway 3/21 to accommodate current and future users, and to meet the recommended 95 percent wind coverage for the runway system. The proposed actions are

expected to provide a short term impact to the local economy in the form of construction related activities (employment, material, and service sales). The expected increase in aircraft activity because of an enhanced air facility will help increase the economic base for the entire community and the region.

7.3.3 Transportation and Ground Access

The major surface transportation route for access to the Douglas Municipal Airport is via Arizona State Highway 80. It is not expected that the improvements to the Douglas Municipal Airport will create any significant impacts to surface transportation in the area. The Arizona Department of Transportation, Transportation Planning Division, was contacted for information regarding the impact of the airport improvement projects to any planned transportation improvements in the Douglas area. The Division listed upcoming project in Douglas to State Highway 80 and to Chino Road, but did not indicate that these projects would have any affect nor be affected by the improvements to the Douglas Municipal Airport (See Appendices, Environmental Overview Letters).

7.4 INDUCED SOCIOECONOMIC IMPACTS

Induced socioeconomic impacts include any major shifts in population, changes in economic climate, or shifts in levels of public service demand. As the airport is developed, it should bring a steady increase in business, itinerant and recreational aviation activities to the airport, which can be seen as a benefit to the local economy. The overall socioeconomic impact caused by continued development of the Douglas Municipal Airport should be beneficial in that it will provide a short term increase in construction employment and a longer duration increase in generated tax revenues as a result of increased visitations to the region by tourists.

7.5 AIR QUALITY

Federal Aviation Administration Order 5050.4A, Airport Environmental Handbook, states that no air quality analysis is needed if the airport is "a general aviation airport and has less than 180,000 operations forecasted annually (FAA Order 5050.4A, Chapter 5, page 33). The aviation forecasts through the year 2014 are well below the level defined in the FAA Order. Therefore, an air quality analysis is not required.

Any impacts to air quality will come from particulate matter due to disturbance of the soil. However, best management practices such as watering of the disturbed area will be used to minimize these impacts.

7.6 WATER QUALITY

The Arizona Department of Environmental Quality, Water Quality Division, has given several measures for the Airport Sponsor to follow to reduce the potential of water contamination as a result of construction at the Douglas Municipal Airport (See Appendices, Environmental Overview Letters). These measures include best management practices which are used to minimize the flow of runoff so that impacts, if any, to water resources will be minimal. The implementation of a Storm Water Pollution Prevention Plan by the Douglas Municipal Airport will help to prevent the discharge of potentially contaminated water into nearby waterbodies. It is anticipated that area water quality will not be significantly affected.

7.7 DOT ACT - SECTION 4(f)

DOT Section 4(f) lands include public parks, recreation areas, wildlife and waterfowl refuges of national, state or local significance and historic lands of national, state or local significance. The proposed action will cause no conflict with Section 4(f) of the United States Department of Transportation Act, since none of the lands proposed to be acquired fall into any of the applicable categories covered by the act. The National Park Service (Southern Arizona Group) has stated that the proposed developments would not affect any National Park Service lands, and the Arizona State Parks has also stated that there are no existing nor planned state parks in the area of proposed development (See Appendices, Environmental Overview Letters).

7.8 HISTORICAL, ARCHITECTURAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

The Arizona State Museum was contacted for comment on the proposed improvements to the Douglas Municipal Airport, but so far has not responded. Although it is anticipated that the proposed runway extension and crosswind runway construction will have no effect to historic properties, a cultural resource survey is recommended prior to any construction activities. Also, if any historic, architectural, archaeological or cultural properties are found during construction, all activity will be stopped to allow for adequate study and recovery of the properties.

7.9 BIOTIC COMMUNITIES

The U.S. Department of Fish and Wildlife and the Arizona State Game and Fish Department were both contacted regarding biotic communities in the area of the runway extension and crosswind runway (See Appendices, Environmental Overview Letters). The U.S. Department of Fish and Wildlife responded with a list of specific endangered species and candidate species which may occur in the area of proposed development. It is recommended that a biological survey be conducted to assess the level of impact, if any, to these biotic communities prior to construction activities.

7.10 ENDANGERED AND THREATENED SPECIES OF FLORA AND FAUNA

As mentioned above, the U.S. Fish and Wildlife Service has identified two endangered species which may occur in the area of development at the Douglas Municipal Airport. These species are the Lesser long-nosed bat and the American peregrine falcon. Several candidate species were also identified in the response from the U.S. Fish and Wildlife Service (See Appendices, Environmental Overview Letters). The Arizona Department of Game and Fish also identified the Texas horned lizard as a candidate species (See Appendices, Environmental Overview Letters). A biological survey is recommended prior to construction to address the level of impact to these listed species.

7.11 WETLANDS

The Arizona Regulatory Office of the Corps of Engineers was contacted regarding the possibility of wetlands occurring near the proposed development. The Corps of Engineers has not responded, however, it is anticipated that these projects will not impact any area wetlands.

7.12 FLOODPLAINS

A review of the Flood Hazard Boundary Maps for the City of Douglas indicates that the area of proposed development is not affected by the 100-year floodplain. A portion of the Flood Rate Insurance Map for the City of Douglas is included in the Appendix of this study.

7.13 COASTAL ZONE MANAGEMENT PROGRAM

There are no coastal zones associated with development of the Douglas Municipal Airport. Compliance with the Coastal Zone Management Act of 1977 is not a factor in this Overview.

7.14 COASTAL BARRIERS

There are no coastal barriers associated with development of the Douglas Municipal Airport. Therefore, compliance with the Coastal Barrier Resources Act of 1982 is not a factor in this Overview.

7.15 WILD AND SCENIC RIVERS

No wild or scenic rivers exist in the area of proposed construction. Consequently, the "Wild and Scenic" river designation will not be a factor.

7.16 FARMLANDS

The U.S. Soil Conservation Service (SCS) was contacted for comment on possible impact to any prime or unique farmland which may be within those acreages planned for the Douglas Municipal Airport runway extension and crosswind runway construction. According to the Douglas Field Office of the SCS, no prime or unique farmland will be impacted by either development action.

7.17 ENERGY SUPPLY AND NATURAL RESOURCES

The proposed development actions will increase the power requirements for the airport, since the runway extension and crosswind runway will be lighted. The increased power requirements are considered to be within the capacity of the current supplier. The operation of the airport even at increased levels of activity will not have a significant impact on the nation's total fuel resources.

7.18 LIGHT EMISSIONS

The proposed Runway 3/21 extension and the replacement crosswind runway will be lighted, and Runway End Identifier Lights (REILs) will be installed on Runway 3/21. The REILs are used to delineate the usable portion of the runway during darkness or poor visibility weather conditions. It is not anticipated that increased light emissions will have a significant impact on the surrounding environs.

7.19 SOLID WASTE IMPACTS

Solid wastes generated at the airport are disposed of at a transfer station, approximately four miles west of the Douglas Municipal Airport. Then, wastes are hauled to a regional landfill at Elfrida. City officials should

assure that no new landfills be established within 10,000 feet of any runway end at the Douglas Municipal Airport.

7.20 CONSTRUCTION IMPACTS

Construction operations will cause specific impacts resulting solely from and limited exclusively to the construction period. Construction impacts are distinct in that they are temporary in duration and the degree of adverse impacts decreases as work is concluded. The following construction impacts can be expected from the proposed development at the Douglas Municipal Airport:

- A slight increase in particulate and gaseous air pollution levels as a result of dust generated by construction activity and by vehicle emissions from equipment and worker's automobiles.
- Increases in solid and sanitary wastes from the workers at the site.
- Traffic volumes which would increase in the airport vicinity due to construction activity (workers arriving and departing, delivery of materials, etc.).
- A slight increase in noise levels at the airport during operations of heavy equipment.
- Construction caused delays or congestion in automobile and aircraft movements, particularly during construction of the runway extension.
- Temporary erosion, scarring of land surfaces and loss of vegetation in areas which are excavated or otherwise disturbed to carry out future developments.

7.21 SUMMARY

The Environmental Overview only provides a summary of areas to be further investigated. Specific areas noted for further review include Compatible Land Uses, Social Impacts, Historical, Architectural, Archaeological, and Cultural Resources, Biotic Communities, and Endangered and Threatened Species. Table VII-1 provides a summary of the potential impacts to all 21 categories listed in the "Airport Environmental Handbook" by the runway and taxiway extension. An Environmental Assessment will address the level of significance of impacts to these categories in further detail.

TABLE VII-1
SUMMARY OF ENVIRONMENTAL IMPACTS
DOUGLAS MUNICIPAL AIRPORT

Environmental Impact Category	Level of Impact
Noise	No Significant Impact
Compatible Land Use	The City of Douglas and Cochise County should adopt the Model Zoning Ordinance included in the Airport Master Plan to ensure that the Douglas Municipal Airport environs are protected from incompatible land uses
Social Impacts	Acquisition of land
Induced Socioeconomic Impacts	Short-term positive economic impact
Air Quality	No Significant Impact (No Air Quality Analysis required)
Water Quality	No Significant Impact (Best Management Practices should be implemented)
DOT Act- Section 4(f)	No Significant Impact (No DOT Act - Section 4(f) lands in specified area)
Historical, Architectural, Archaeological, and Cultural Resources	Cultural Resource Survey recommended prior to construction
Biotic Communities	Biological Survey recommended prior to construction
Endangered and Threatened Species of Flora and Fauna	Biological Survey recommended prior to construction
Wetlands	No Significant Impact
Floodplains	No Significant Impact
Coastal Zone Management	Not Applicable
Coastal Barriers	Not Applicable
Wild and Scenic Rivers	No Significant Impact
Farmlands	No Impact
Energy Supply and Natural Resources	No significant impact except increased power supply requirements
Light Emissions	No Significant Impact
Solid Waste Impact	No Significant Impact - City officials should assure no new landfills, treatment plants, etc., be located within 10,000 feet of the airport
Construction Impacts	Best management practices will be used to reduce any potential impacts arising from the construction project.

The threshold of significance for the various environmental impact categories is defined in Federal Aviation Administration Order 5050.4A.